



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D206-667-207BL
Job Sheet 168327-G



Part No: D206-667-207BL

Job Qty: 1 ea

Part Name: Aft Crosstube - Mid Height 206L / L1 / L3 / L4, Blue



Part Weight: 0 lbs

Status: Scheduled

Priority: High

Job Created: 11/13/17

Job Tracking No:

Due Date: 11/20/17

Created By: Mario Poulin

Type: SOLD

Description:

Customer: Air Evac Lifeteam (CAEVA02)

Air Medical Group Holdings, Concur Invoice Capture C/O (*AEL*), 10700 Prairie Lakes Drive Eden Prairie, MN, 55344 USA ph:(636) 695-5385

Note: DWG D206-667-247 REV A (DEO), IIN-D206-667 REV D RevA 11.01.13 New Issue EC verified by:DD IPP
REV:B 11.08.08 PER ECN 11-615 DD VERF:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	11/17/17	11/17/17	0.00	0.00	Start Up Crosstubes		✓
110	CNC Bend Crosstubes	1 pcs	11/17/17	11/17/17	0.00	4.35	CNC Bend Crosstube		✓
120	QC <i>★ PTD</i>	1 pcs	11/17/17	11/17/17	0.00	0.00	QC15		✓
130	Crosstubes	1 pcs	11/18/17	11/18/17	0.00	2.86	Crosstube		✓
140	HandFXtube	1 pcs	11/18/17	11/18/17	0.00	0.55	HandFinish5		✓
150	QC	1 pcs	11/18/17	11/18/17	0.00	0.00	QC7		✓ <i>DAS</i>
160	QC	1 pcs	11/18/17	11/18/17	0.00	0.00	QC5		✓ <i>38</i>
170	Outsource	1 pcs	11/18/17	11/18/17	0.00	0.00	Outsource2		✓ <i>9-88</i>
180	Packaging	1 pcs	11/18/17	11/18/17	0.00	0.00	Packaging2		✓
190	QC	1 pcs	11/18/17	11/18/17	0.00	0.00	QC5		✓
200	Outsource	1 pcs	11/18/17	11/18/17			ATE003-VC		✓
205	Packaging	1 pcs	11/18/17	11/18/17	0.00	0.00	Packaging2		✓ <i>DAS</i>
210	QC	1 pcs	11/18/17	11/18/17	0.00	0.00	QC14		✓ <i>38</i>
220	Crosstubes	1 pcs	11/18/17	11/18/17	0.00	2.86	Crosstube		✓ <i>NOV 24 2017</i>
230	Crosstubes	1 pcs	11/20/17	11/20/17	0.00	1.91	Crosstube		✓ <i>NOV 24 2017</i>
240	QC	1 pcs	11/20/17	11/20/17	0.00	0.00	QC5		✓ <i>9-88</i>
250	Packaging	1 pcs	11/20/17	11/20/17	0.00	0.00	Packaging1		✓ <i>SMB</i>
260	QC	1 pcs	11/20/17	11/20/17	0.00	0.00	QC4		✓ <i>AT</i>
265	DC	1 pcs	11/20/17	11/20/17	0.00	0.00	DC		✓
270	Packaging	1 pcs	11/20/17	11/20/17	0.00	0.00	Packaging3		✓
280	QC21-FG	1 Ea	11/20/17	11/20/17	0.00	0.00	QC21		✓ <i>DAS</i> <i>NOV 29 2017</i>

Part Op 110 - Bend tube as per Dwg D206-667-247 using CNC bender program D206-667-207

Descriptions: 120 - QC15- Crosstube Dimensional Check

130 - ***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY: ***** 1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D206-667-247. Drill all (3) top holes. Holes facing inboard. Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-247 ***** ENSURE PROPER JIG POSITIONING BEFORE DRILLING***** , VERIFIED BY: ***** 2- Drill fwd rivet holes using drill Jig DT8787 fwd as per Dwg D206-667-247. Note: FWD side has 3X top holes facing inboard. 3- C'sink holes as per dwg D206-667-247. Allow rivet to sit below surface to compensate for paint. 4- Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins. Drill ONLY 2 top holes ONLY plug most bottom hole to prevent accidental drilling. Drill holes and ream using drill Jig DT8583 & DT8584 as per Dwg D206-667-247. Drill only

D206-667-207BL / 168327-G / 5013127

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☒ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☒ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date: 17/11/17	Step #: 110	QTY Effective:			MRB (QSI042) Approval DAS 12 9-89 17/11/17		
Description Work Order Deviation			Disposition			Completed By DAS 12 9-89 17/11/17	
Tube is bent high on one side, +0.155 above nominal.			Acceptable. Will not cause fit issue.			Lead hand / Supervisor Approval Verification	

Mfg Date: 11/23/17
Job No: 168327-G

QC

PART NO: D206-667-207BL
Revision: Start up Operation
Operation: Change No:

Aft Cross tube - Mid Height 206L / L1 / L3 / L4, Blue



S013127



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Mfg Date: 11/23/17
Job No: 1683

PART NO: D206-667-207B
Revision: Start up Operation
Operation: Change No:

Aft Cross tube - Mid Height 206L / L1 / L3 / L4



S011814



Dart Aerospace Ltd.
1270 Al
Hawkes
CANADA
TEL: 1
Email: s
www.da

the top (2) holes. Drill & ream the top (2) hole

140 - Crosstubes Chemical Conversion ***IMMEDIATELY AFTER GRINDING*** 1- PRESSURE WASH X-TUBE INSIDE AND OUT 2- ALODINE AND ACID ETCH X-TUBE INSIDE AND OUT AS PER QSI005.

150 - QC7-Inspect Chemical Conversion Coat

160 - QC5- Inspect part completeness to step on W/O

170 - Outsource process - NDT per QSI038 4.1 *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Liquid Penetrant Inspection as per QSI 038Or Issue P/O: _____ LPI as per ASTM 1417 Level 2 Attach copy of NDT results to work order

180 - Receive & Inspect for Damage & Mat'l Certs *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Ensure copy of NDT results attached to work order.

190 - QC5- Inspect part completeness to step on W/O *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** Ensure results are as per Dwg D206-667-247

200 - ISSUE PO _____ *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____ ***MASK SCRIBE B# & P# AND VERIFY*** 1-Prime inside and outside crosstube as per QSI 005 4.2 2-Paint outside crosstube as per QSI 005 4.2 PRIME: Start Time: _____ Finish Time: _____ PAINT: DELFLEET BLUE _____ Start Time: _____ Finish Time: _____ CLEAR DELFLEET B _____

205 - Receive & Inspect for Damage & Mat'l Certs

210 - QC14- Inspect Spray Paint Wrap in plastic bag to protect from scratches ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____

220 - 1-Install nut plates as per Dwg D206-667-247.

230 - 1-Abrade mating surfaces of support and crosstube with 400 grit sandpaper, clean the area with 4105S wash 'n' wipe 2-Install supports with Proseal 890 per DSI9565 and QSI 015 A/R Proseal 890 Batch: _____ 3- Torque bolts as per dwg

240 - QC5- Inspect part completeness to step on W/O ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____

250 - Pick Kit

260 - QC4- 100% Inspect kits for completeness ***VERIFY BY _____ BATCH # TO MATCH W/O _____ ***VERIFY BY _____ PART # TO MATCH W/O _____

265 - Document Control Photocopy bluefile and create labels as per PPP D206-667-207 chg 002

270 - Identify as per dwg & Stock Location: _____ Identify and pack for shipping as per PPP D206-667-207 Location: _____ PPP Rev: _____

280 - QC21- Final Inspection **DMS** Work Order Release

Proseal 138408 exp 2/18 41 24 2017 3.89

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	D206-667-247TRN	1	1	0	0
220-Crosstubes	D2873-043 5001319	②	113	0	0
	D2873-045 P165660	②	37	0	0
	MS20601-AD4W10FM137593.0014	②	181	0	0
230-Crosstubes	D2892-1 8002938	② 5002935	7	0	0
	D3595-063-450 R164611-151	④	48	0	0
	MS21920-22 5000566	④	19	0	0
250-Packaging	AN5-10A 5013977	10	155	0	0
	AN5-32A 5013970	4	141	0	0
	AN5-34A 5013968X1	4	57	0	0
	MS21042L5 5013267	4	413	0	0
	NAS1149D0563J 5013960	18	1,347	0	0

Part Specifications

Specifications could not be found.

Plex 11/13/17 1:29 PM dart.poulin.mario

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

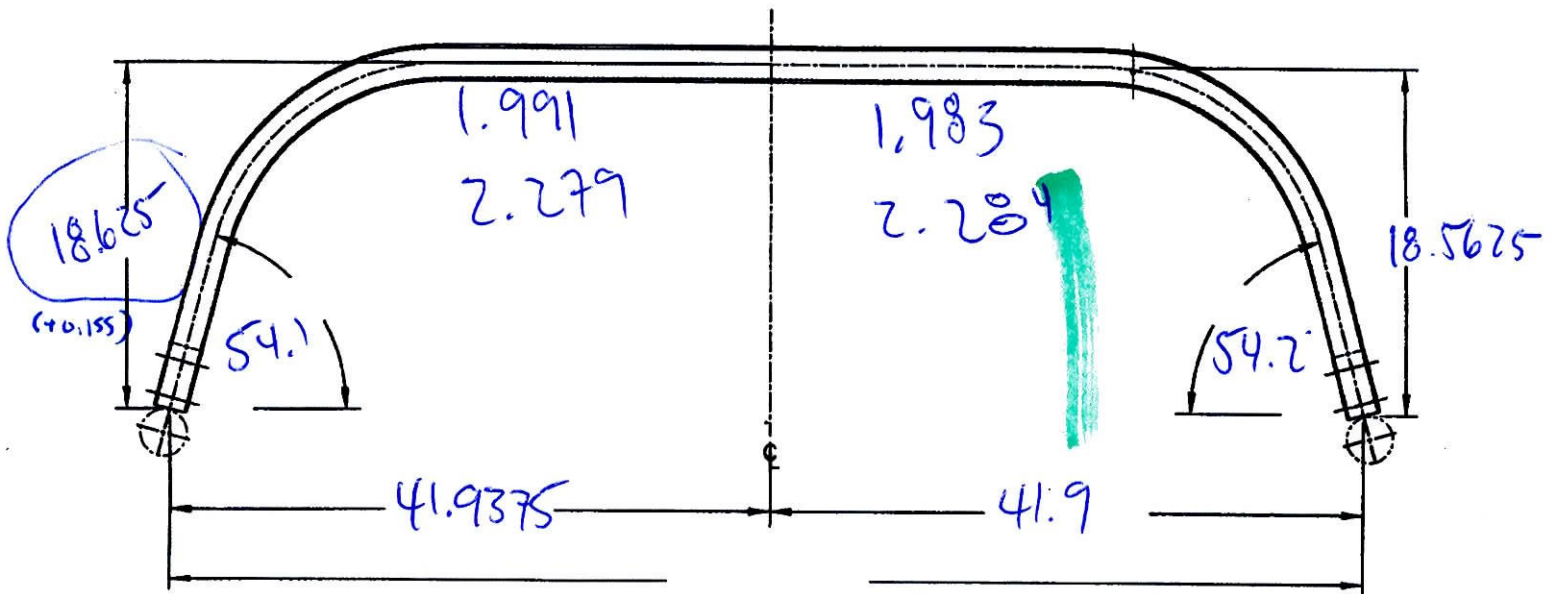
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____																							
Misidentified ☐	Past Due ☐																								

DART AEROSPACE LTD		Work Order:	168327-G
Description: Crosstube Mid Aft (206L)		Part Number:	D206-667-207
Inspection Dwg: D206-667-247 Rev: A		Page 1 of 1	

Required Dimension	Min	Max
Height	18.34	18.60
1/2 Span	41.79	42.05
Angle	54°	56°
Total Span	83.59	84.09
Bending Passes	10	--
Crushing	--	6%



	Side A	Side B
Bending Passes	14	14
Crushing	6.7	7.0%
Comments		
Acceptable per DR-1059 Rev A		
	DAS	
	12	
	9-89	

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	12.02.15	New Issue	KJ	
B	12.04.16	Added bending, crushing dimensions	KJ	

**skyservice****Work Order Traveler**
Sky Service F.B.O. Inc.

Po 038410

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO34098	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: PO038410
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT ON 19 CROSSTUBES AS PER PO038410

6 AFT CROSSTUBES , P/N# D119-796-241 , J/S# 164137, 168120, 168119, 165573, 164136, 168330,

5 FWD CROSSTUBES, P/N# D119-796-141 , J/S# 165701, 168121, 165702, 164478 164479

4 FWD CROSSTUBES , P/N# D206-667-107BL , J/S# 168325-C, 168325-D, 168325-E, 168325

4 AFT CROSSTUBES, P/N# D206-667-207BL , J/S# 168327, 168327-A, 168327-B, 168327-G

Action Taken:						Date:	Initial/Stamp:
LPI C/O IAW ASTM E-1417-M13 NO CRACK FOUND PEN. ZL-56, MPO13600, CLEANER SKC-S MPO13923 , EMU. MPO15896, DEV. MPO11715 , UV LIGHT M-20142						NOV 20 2017	
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp	Date:
Name: RAFIK MELIKIAN		NOV 20 2017



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038459

Items												
Line Item	Job	Part	Rev	Description	Item Tax	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
				MATCH W/O ***VERIFY BY _____ PART # TO MATCH W/O ***MASK SCRIBE B# & P# AND VERIFY*** 1-Prime inside and outside crosstube as per QSI 005 4.2 2-Paint outside crosstube as per QSI 005 4.2 PRIME: Start Time: _____ Fininsh Time: _____ PAINT: DELFLEET BLUE _____ Start Time: _____ Finish Time: _____ CLEAR DELFLEET B _____								
8	168327-G	D206-667-207BL		Aft Crosstube - Mid Height 206L / L1 / L3 / L4, Blue ISSUE PO _____ *** WEAR LATEX GLOVES WHEN HANDLING CROSSTUBE*** **VERIFY BY _____ BATCH # TO MATCH W/O ***VERIFY BY _____ PART # TO MATCH W/O ***MASK SCRIBE B# & P# AND VERIFY*** 1-Prime inside and outside crosstube as per QSI 005 4.2 2-Paint outside crosstube as per QSI 005 4.2 PRIME: Start Time: _____ Fininsh Time: _____ PAINT: DELFLEET BLUE _____ Start Time: _____ Finish Time: _____ CLEAR DELFLEET B _____		Firmed	11/23/17	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00

Grand Total: \$1,800.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/23/17 8:15 AM dart.baker.diane



Dart Hawkesbury
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada
Tel (613) 632-5200

Inventory

Operation Number	Operation	Serial Number	Job	Quantity	Weight	Original Serial Number	Location	Container	Status	Added	Special Comments	Label	Supplier	Change No
Part Number: D206-667-207BL Revision: Aft Crosstube - Mid Height 206L / L1 / L3 / L4, Blue														
200	Outsource	S013130	168327-G	1 pcs	0		QC6		WIP	11/23/2017	Issue Container			
Operation Totals:		1		1	0									
Part Totals:		1		1	0									
Totals:		1		1	0									

Plex 1/8/2018 10:51 AM Dart.Boucher.Sylvie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					